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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,818	12/07/2001	Kei Kato	32011-176966	9362

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EXAMINER

AVELLINO, JOSEPH E

ART UNIT PAPER NUMBER

2143

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/005,818

Applicant(s)

KATO ET AL.

Examiner

Joseph E. Avellino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2001/12/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-20 are presented for examination; claim 1 independent.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4, 8-10, 17, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 4 recites the limitation "said index" which lacks antecedent basis.

Correction is required.

5. Claim 8 recites the limitation "the fourth layer or a layer there above" which lacks antecedent basis. It appears to the Office that the Applicant is attempting to claim a layer as applied to the OSI specification. For examination purposes this is how this claim will be understood. Correction is required.

6. Claims 9, 10, 17, and 18 recite the limitation "the second layer of the protocol" which lacks antecedent basis. It appears to the Office that the Applicant is attempting to claim a layer as applied to the OSI specification. For examination purposes this is how this claim will be understood. Correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Carvey et al. (USPN 6,359,879) (hereinafter Carvey).

8. Referring to claim 1, Carvey discloses a datagram transmission device wherein:

an identification key is generated using information (i.e. flow identifier) which is stored in a received datagram and is used for transmission control;

a transmission control rule corresponding to said identification key is selected from a transmission control rule list (i.e. forwarding table);

and transmission of said datagram is controlled in accordance with the selected transmission control rule (i.e. the datagram is forwarded on the selected trunk) (col. 5, lines 30-50).

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9. Referring to claim 2, Carvey discloses attribute information searching means that searches combinations of attribute information employed for transmission control using the destination address of the received datagram (col. 5, lines 30-50);

identification key generation means that reads from said datagram said attribute information contained in the search result of said attribute searching means and generates said identification key corresponding to the value of said attribute information that has been read (i.e. the flow identifier is used to generate the identification key) (col. 5, lines 30-50);

transmission control decision means that selects on a transmission control rule (i.e. forwarding table entry) using said identification key (i.e. hashed flow identifier) generated by said identification key generation means (col. 5, lines 30-50); and

transmission control execution means that controls transmission in accordance with a transmission control rule selected by said transmission control selection means (selection of the specific trunk) (col. 5, lines 30-50).

10. Referring to claim 3, Carvey discloses an information table that stores information indicating combinations of said attribute information (i.e. longest matching prefix of the packet destination) (col. 5, line 50 to col. 6, line 17); and

address searching means that searches the indexes of said information table using said destination address (col. 5, lines 30-50).

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11. Referring to claim 4, Carvey discloses the identification key generation means generates said identification key including an index (i.e. hash of the flow identifier) obtained by the searching of said address searching means (col. 5, line 30 to col. 6, line 17).

12. Referring to claim 5, Carvey discloses the identification key is generated using a compressed value of the value of said attribute information of one or more types (i.e. hashed using a bitwise exclusive-or operation) (col. 5, lines 39-50).

13. Referring to claim 6, Carvey discloses an action table that stores a plurality of types of execution content of said transmission control (i.e. forwarding tables) (col. 5, lines 50-67);

hash searching means that searches the indexes of said action table by hash searching using said identification key (col. 5, lines 30-67).

14. Referring to claim 7, Carvey discloses said information table stores destination addresses execution information (i.e. forwarding tables) that indicates the execution content when said transmission control is only transmission (i.e. regardless of how many transmissions have been processed, the system will look to find the line with the longest prefix in order to correctly forward the packet upon the most appropriate line) (col. 5, lines 50-60); and

said transmission control execution means executes said transmission when said destination address execution information has been input (i.e. once destination forwarding table has been consulted, the trunk line corresponding to the output port is forwarded (col. 5, lines 50-60; Figures 6-7).

15. Referring to claim 8, Carvey discloses the attribute information belongs to the fourth layer or above (of the OSI model, the fourth layer is the "transport" layer, which controls transfer between sessions and is responsible for end-to-end error recovery, such as TCP and flow control in ATM, Carvey discloses using the flow identifier of the packet) (col. 5, lines 30-50).

16. Referring to claim 9, Carvey discloses the attribute information searching means searches combinations of attributed information belonging to the second layer of the protocol and destination address (col. 6, lines 1-20).

17. Referring to claims 10 and 18, Carvey discloses the information belonging to the second layer of the protocol is a virtual channel identifier of the asynchronous transfer mode (i.e. flow identifier) (col. 6, lines 1-10)

18. Claims 11-17 are rejected for similar reasons as stated above. Furthermore the source and destination addresses are converted into index values (col. 6, lines 1-5).

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19. Referring to claims 19 and 20, Carvey discloses the device is an Internet protocol router and switch (a router is inherently a switch) (Figure 2, ref. 1-3).

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

21. Tal et al. (USPN 6,778,534) discloses high-performance network processor.

22. Gleeson et al. (USPN 6,763,023) discloses network switch with self-learning routing facility.

23. Hodgins et al. (USPN 6,834,055) discloses serving data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEA
January 10, 2005

William C. Vaughn, Jr.
Primary Examiner
Art Unit 2143
William C. Vaughn, Jr.